G. R. Johnson.

Station Indicator.

No. 95,692. Patented Oct. 12, 1869.

Fig: 1.

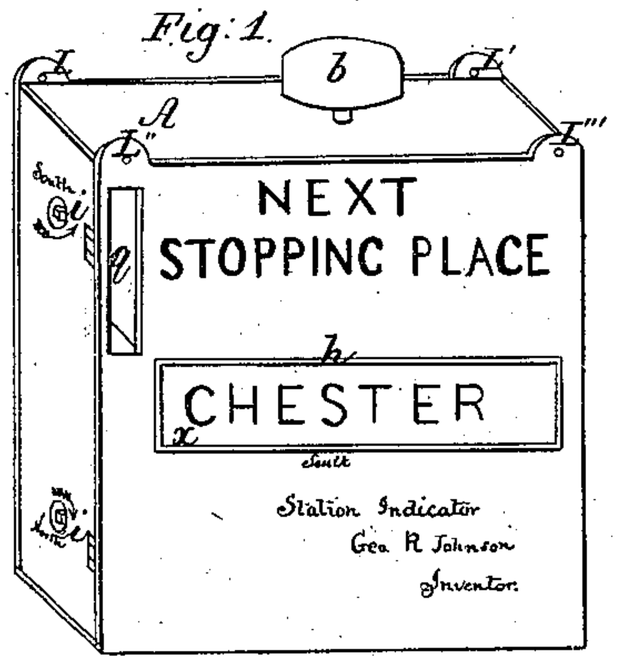


Fig: 2.

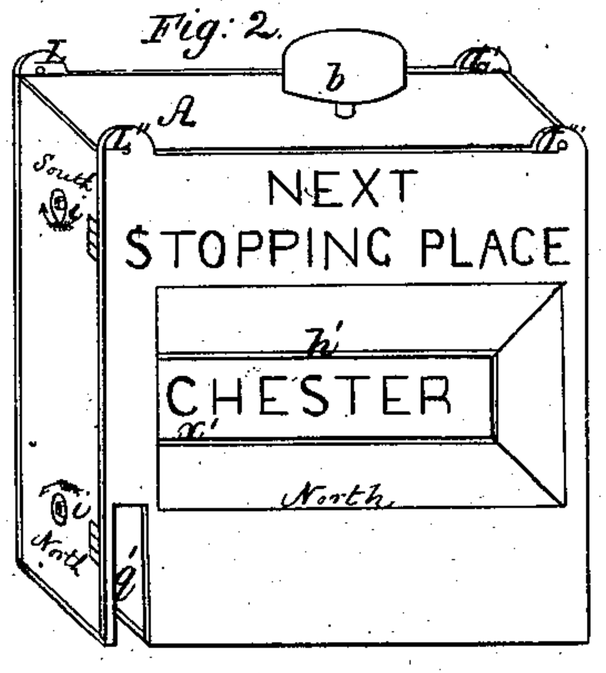


Fig: 3.

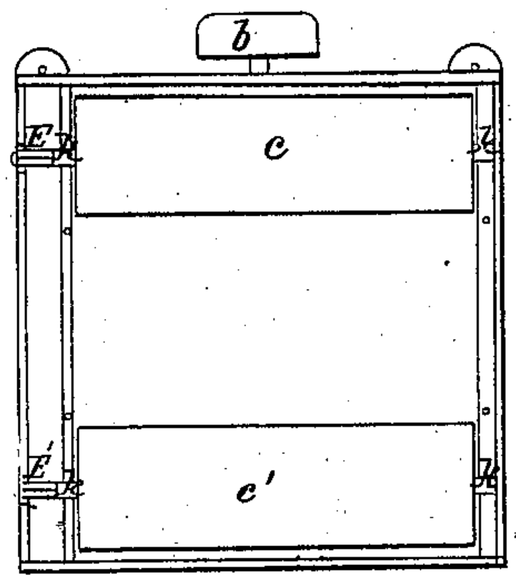


Fig: 4.

Fig: 6.

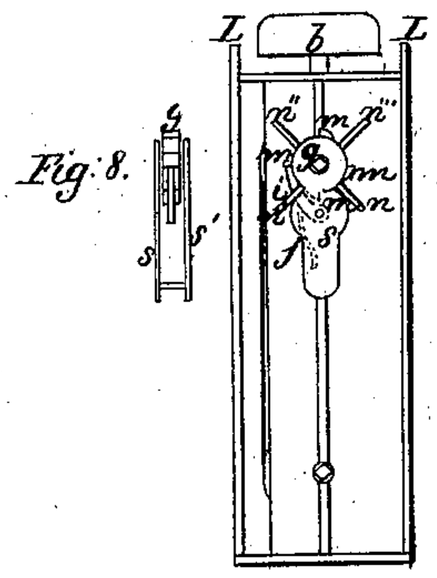


Fig: 5.

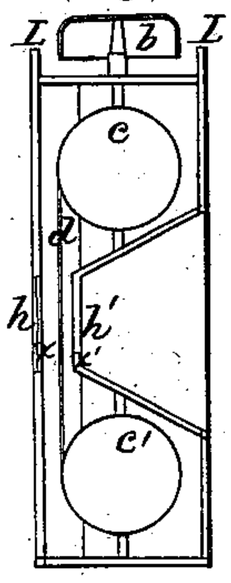
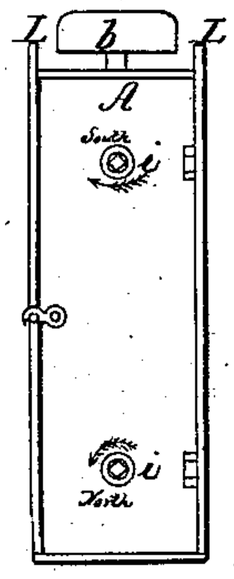


Fig: 7.



Witnesses
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GEORGE R. JOHNSON, OF WILMINGTON, DELAWARE.

Letters Patent No. 95,692, *dated October* 12, 1869.

IMPROVEMENT IN STATION-INDICATORS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, GEORGE R. JOHNSON, of Wilmington, in the county of New Castle, and State of Delaware, have invented a new and useful Improvement in Railroad-Station Indicators, of which the following is a full and exact description, reference being had to the annexed drawings.

Indicators have no practical value unless they expose the names of stations with precision and correctness at the proper times.

Hitherto the rollers, upon which is wound the apron carrying the names of stations, have been operated by ratchet-wheels having small, close teeth.

With such ratchets, the apron is subject to derangement, being apt to expose either a wrong name, or a part only of the right name, when brought into action.

To obviate these defects, and to insure the full exposure of the required name at the proper time, is the object of my improvements, which consist—

First, in the employment of a ratchet-wheel provided with four (4) teeth, separated by equal quarter-circle spaces.

Second, in arranging the names of the same stations on both sides of the apron in contrary directions, with intervening spaces, (between the names on each side,) the breadth of which increases (or diminishes, according as the measurement is begun at one end or the other end of the apron,) sufficiently to compensate with exactness for the increasing diameter of the taking-up roll, meaning the roll upon which the apron is at any time being wound.

In the drawings—

Figures 1 and 2 are perspective views, looking at opposite sides of the indicator.

Figure 3 is an elevation, the side cover and the apron bearing the names of stations being removed.

Figure 4, also an elevation, the apron being in place.

Figure 5, a transverse vertical section through the middle.

Figure 6, an end elevation, the end cover being removed.

Figure 7, also an end elevation, the end cover being in place.

Figure 8 represents the edge of the ratchet-wheel, ratchet-lever, and pawl, detached.

In the drawings—

A represents a case or box.

b, a bell.

h h', apertures in opposite sides of the box.

x x', strips of glass, fitted in said apertures.

c c', rollers, which turn in journals *k*, fig. 3, with friction sufficient to keep them from moving, except as they are moved by the person intended to operate them.

d is an apron, one end of which is fastened to roller *c*, and the other end to roller *c'*.

The names of the several stations on any road are marked on both sides of the apron *d* in regular successive order, the names on one side being in reverse of those on the other side, it not being intended that both sides, but that one side only, shall be visible at any time, the indicator being located at the front end of the car.

g, fig. 8, is a ratchet-wheel, which has a perforation through its middle, shaped to fit the ends of the roller-journals.

The ratchet has bearings in the two plates *s s'*, which plates are united by cross-pins, and constitute a frame to which the pawl *i* and pawl-spring *j* are attached.

The ratchet-wheel *g* has four (4) teeth, *m*.

The frame *s s'* forms a lever, the free or outer end of which projects through the slot *q*, fig. 1, or *q'*, fig. 2, and has a slightly elastic cord (not shown) attached to it, by which it is drawn upward, and the ratchet moved one tooth ahead, and thus caused to move the apron sufficiently to expose the name next in order.

The slots *q* and *q'* are each made of just sufficient length to allow the pawl to pass one (1) tooth of the ratchet, at the same time that the upward movement of the lever *s s'* is stopped by the top of slot *q* or *q'*, as the case may be.

The lever *s s'* drops by its own gravity, or may be drawn back by a spring, until its free or outer end rests on the bottom of slot *q* or the slot *q'*, as the case may be.

The movement of the ratchet one tooth forward, causes the withdrawal of the name exposed, and the exposure of the name next in order on the apron.

The lever *s s'*, ratchet, and pawl, form one piece, which is detachable, and is applied to the journal of one roller when the car is moving in one direction, and to the journal of the other roller when the car is moving in the reverse direction, it being understood that when the direction of motion of the car is reversed without turning the car, the indicator is carried to the fore end of the car, and the reverse face of the indicator turned out.

n n' n'' n''' are projections on the journal of roller *c*. These projections strike the end of a lever, not shown, and by ordinary mechanism cause the hammer to strike the bell when the name of a station is presented.

The widths of the spaces between the names for any road are first ascertained by trial, after which in-

dicators for the same road can, of course, be multiplied indefinitely.

One indicator is placed in each car, and all are operated by one main cord, to which the ends of the several ratchet-lever cords are attached.

Having thus described my invention,

I claim, and desire to secure by Letters Patent—

The combination of the four (4) toothed ratchet *g*, pawl *i*, and spring *j*, with the rollers *c c'* and apron *d*, when the names of the same stations are arranged on both sides of said apron in contrary series, with intervening spaces, which vary in width to compensate for the increase in the diameter of the taking-up roll, all substantially as set forth.

GEO. R. JOHNSON.

Witnesses:
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A. H. KINKELIN.